IN THE CLAIMS:

  1. (Currently Amended) A method of recognizing a speech signal, comprising:

  providing a Hidden Markov Model (HMM) having a state;

  providing a probability density function of said state, said probability density function being associated with a mixture of densities;

  providing an adjustable bias to a distribution parameter of said probability density function ~~of a Hidden Markov Model (HMM)~~;

  detecting a first speech signal including a plurality of frames;

  using said HMM to recognize said first speech signal;

  determining a correction term based on a probability of being in said state with said mixture after observing said first speech signal, and by performing a summation over only said frames of said speech signal;

  adding said correction term to said adjustable bias; ~~updating said adjustable bias using said first speech signal;~~ and

  recognizing [[a]] said second speech signal ~~detected after said first speech signal~~ with said HMM employing said updated adjustable bias.

  2. (Previously Presented) The method of claim 15 wherein said adjustable bias is defined for each state of said HMM.

  3. (Previously Presented) The method of claim 15 wherein said adjustable bias is shared among different states of said HMM.

4.   (Previously Presented) The method of claim 15 wherein said adjustable bias is shared by groups of states of said HMM.

5.   (Previously Presented) The method of claim 1 wherein the adjustable bias is shared by all states of the HMM.

6.   (Previously Presented) The method of claim 1 wherein said updating is based on said first speech signal and model parameters of the HMM that are current when said first speech signal is detected.

7.   (Previously Presented) The method of claim 1 wherein said updating is based on said first speech signal and information derived from all signals detected prior to said first speech signal.

8.   (Cancelled)

9.   (Previously Presented) The method of claim 1 wherein a length of said first speech signal is arbitrary.

10.   (Cancelled)

11.   (Previously Presented) The method of claim 1 wherein said first speech signal is an utterance.

12.   (Previously Presented) The method of claim 1 wherein said first speech signal has a fixed duration.

13.   (Previously Presented) The method of claim 12 wherein said duration is 10 minutes.

14.   (Previously Presented) The method of claim 17 wherein said correction term is a product of a sequence whose limit is zero, whose summation is infinity and whose square summation

is not infinity and the summation of quantities weighted by a probability, the quantities based on a divergence of desired model parameter and observed signal.

15.   (Previously Presented) The method of claim 1, wherein said adjustable bias is state-dependent.

16.   (Previously Presented) The method of claim 1, wherein said HMM is one of a plurality of Hidden Markov Models for which state-dependent biases are updated.

17.   (Cancelled)

18.   (New) The method of claim 1, wherein said probability is based on all speech signals detected prior to said second speech signal.

19.   (New) The method of claim 1, wherein said second speech signal is a speech signal immediately succeeding said first speech signal.

20.   (New) The method of claim 1, wherein said distribution parameter is a mean vector of a Gaussian distribution.

21.   (New) The method of claim 20, wherein said correction term comprises a first factor, based on an average covariance weighted by a function of said probability, and a second factor, based on an averaged normalized difference between a vector representing said second speech signal and said mean vector, said averaged normalized difference weighted by said function of said probability.